Deposition Designations for:
ALAN C. WHITEHOUSE
June 16, 2009

Deposition Designation Key

Arrowood = Arrowood Indem. Co. f/k/a Royal Indem. Co. (Light Green)

BNSF = BNSF Railway Co. (Pink)

Certain Plan Objectors "CPO" = Government Employees Insurance Co.; Republic Insurance Co. n/k/a Starr Indemnity and Liability Co.; OneBeacon America Insurance Co.; Seaton Insurance Co.; Fireman's Fund Insurance Co.; Allianz S.p.A. f/k/a Riunione Adriatica Di Sicurta; and Allianz SE f/k/a Allianz Aktiengesellschaft; Maryland Casualty Co.; Zurich Insurance Co.; and Zurich International (Bermuda) Ltd.; Continental Casualty Co. and Continental Insurance Co. and related subsidiaries and affiliates; Federal Insurance Co.; and AXA Belgium as successor to Royal Belge SA (Orange)

CNA = Continental Cas. Co & Continental Ins. Co. (Red)

FFIC = Fireman Funds Ins. Co. (Green)
FFIC SC = Fireman Funds Ins. Co. "Surety Claims" (Green)

GR = Government Employees Ins. Co.; Republic Ins. Co. n/k/a Starr Indemnity and Liability Co.

Libby = Libby Claimants (Black)

OBS = OneBeacon America Ins. Co. and Seaton Ins. Co. (Brown)

PP = Plan Proponents (Blue)

Montana = State of Montana (Magenta)

Travelers = Travelers Cas. and Surety Cos. (Purple)

UCC & BLG = Unsecured Creditors' Committee & Bank Lenders Group (Lavender)

AFNE = Assume Fact Not in Evidence
AO = Attorney Objection
BE = Best Evidence
Cum. = Cumulative
Ctr = Counter Designation
Ctr-Ctr = Counter-Counter
ET = Expert Testimony
F = Foundation
408 = Violation of FRE 408
H = Hearsay
IH - Incomplete Hypothetical
L = Leading
LA = Legal Argument
LC = Legal Conclusion
LPK - Lacks Personal Knowledge
LO = Seeking Legal Opinion
NT = Not Testimony
Obj: = Objection
R = Relevance
S = Speculative
UP = Unfairly Prejudicial under Rule 403
V = Vague

IN THE UNITED STATES BANKRUPTCY COURT

FOR THE DISTRICT OF DELAWARE

In re:	)	Chapter 11
	)	
W.R. GRACE & CO., et al.,	)	No. 01-01139 (JKF)
	)	
Debtors.	)	

Videotaped Deposition Upon Oral Examination Of
ALAN C. WHITEHOUSE, M.D.

Taken at 17620 International Boulevard
Seattle, Washington

DATE TAKEN: June 16, 2009

REPORTED BY: CATHY ZAK, CCR# 1922

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Q Approximately how much money have you made over the past five years as a result of being asked to give expert reports or testimony on matters relating to Libby asbestos?
A Well, there's also the Department of Justice that had paid me as well, which you probably know as well. I guess probably over $100,000, but I'm not sure I know the exact amount. I've never added it up.
MR. FINCH: Why don't we mark this as the next exhibit.
Q (By Mr. Finch) Are you aware that the CARD Clinic maintains a Web site?
A Yes.
(Exhibit-4 marked for identification.)
Q (By Mr. Finch) Did you have any -- who -- did you have any role in reviewing the information put on the Web site?
A No, and I have no idea what's on it now.
Q Would you expect that things that the CARD Clinic would say about Libby asbestos disease and asbestos disease in general on their Web site to be truthful and accurate?
A Yeah, I can't -- I can't answer that

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question. I have not looked at the Web site since the first draft, and the thing's came out probably over five, six years ago. I haven't even looked at it since then.
Q Okay. Would you turn to what's been marked as Whitehouse Deposition Exhibit-4, and this is what -- I'll represent to you this is what I printed out from the CARD Clinic Web site a couple of weeks ago. There's a section that says, frequently asked questions. Do you see that?
A What page are --
Q Oh, the front page.
A Right here?
Q If you skip past all of the -- and what I have done -- because when I printed this out, it cut off the columns on the right-hand side. I had my secretary go and cut and paste all the words into the document behind it so that you can see -- for example, if you go about seven pages back, you see where the text type changes? All we've done is we've taken the text that -- as it appears --
A Oh, I see what you've done.
Q -- on the Web page so you can see the whole sentence wrap around as opposed to being cut off. Do you see that?

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MR. LEWIS: Are you representing that this is accurate --
MR. FINCH: Yes.
MR. LEWIS: -- an accurate reproduction?
MR. FINCH: Yes.
MR. LEWIS: Thank you.
MR. FINCH: It's an accurate reproduction of what's on the Web site.
A I see it.
Q (By Mr. Finch) All right. Can you go to the -- can I see your copy, Dr. Whitehouse, just for a second?
A Sure. (Document passed.)
Q All right. I've put a tab on the page I want you to turn to.
A Okay.
MR. LEWIS: Let me see that.
THE WITNESS: (Document passed.)
Q (By Mr. Finch) Do you see that the title of that says, Libby Amphibole Asbestos Exposure in Libby, Montana?
A Yes.
Q The one, two, three, fourth -- fifth paragraph down -- and I'm going to read from the

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typewritten version of this as opposed to the printout version because it's -- you can see all the words better, but it says, Zonolite and Monocote are two trade names under which Libby vermiculite products were marketed. There are two overwhelming examples of the extent to which exposure can spread through commercial products.
And then it talks about vermiculite -- Zonolite attic insulation and Monocote spray-on fire -- fire proofing. Do you see that?
A I do.
Q Did you -- do you have the understanding that Libby asbestos was a contaminant in both Monocote spray-on fire proofing and Zonolite attic insulation?
A That's my understanding.
Q Did you also understand that it was in -- a contaminant in many of Grace's other commercial construction products as well?
A Yeah, although I don't know the exact extent of them.
Q Okay. So to the extent that it is -- let me back up.
You're of the view that asbestos Libby (sic) from Libby asbestos causes pleural disease that's more severe than seen in cohorts of people who were

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shield around Lincoln County, Montana, that would make exposure to Libby asbestos in Montana more likely to lead to disease or death as compared to exposure with Libby asbestos in New York City, for example?

A I don't have any evidence to, you know, really make any real comment on that because what I've studied has been strictly asbestos in Libby.

Q Okay. So you can't say, for example, that people who are exposed to Libby asbestos in Libby are any sicker or have a different severity of their pleural disease as compared to people who are exposed to Libby asbestos in Ohio at a vermiculite processing facility or in New York at a construction site, can you?

A No, except that I have seen about a half of a dozen patients over ten years from various expansion plants and other jobs, not only in Spokane, in California, Minnesota who had very severe disease.

Q They had very severe disease as a result of being exposed to the Libby asbestos?

A Yes.

Q And so would you agree with me then that the -- let me back up.

Mr. Lewis used a term when he said who he

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represented. He said he represents the Libby claimants. And I understood that to mean people who have filed a lawsuit or would have filed a lawsuit against W.R. Grace. Do you have that understanding?

A Yes.

Q Okay. But you're a doctor and you look at people who -- or a patient with asbestos disease, correct?

A That's correct.

Q And you treat people regardless of whether they're a claimant or not a claimant?

A Yeah. Most of the time when I see them, I don't even know whether they're a claimant or not.

Q Okay. And so would you agree with me that to the extent there is something different about the Libby asbestos that causes more severe pleural disease that would affect people who aren't Libby claimants, i.e., people who were exposed to Libby asbestos outside of Libby, Montana, just as it would affect people in Libby, Montana?

A I'd make that assumption, yes.

Q And have you read William Longo's* report in the Grace case?

A It's been quite a while since I read it.

Q He is -- he is not a medical doctor. He is a

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Ph.D. who has tested various Grace commercial construction products and is of the view or actually has confirmed that they, A, contain Libby asbestos -- a lot of them contain asbestos in the vermiculite fix that went in as filler to those products like Monocote. I take it you don't dispute or have any basis to challenge his conclusions about that?

MR. LEWIS: Object to the form of the question on the grounds that it's compound.

MR. FINCH: Let me rephrase.

MR. LEWIS: And it's unintelligible as stated.

Q (By Mr. Finch) Did you understand my question?

A Yeah, I understand your question, but, you know, I can't recall. That was a long report with, I mean, all kinds of permutations and combinations of times and compounds that he was obviously aware of and I wasn't, so I'm not sure I can really comment on it.

Q Okay. So you're just not in a position to comment on it one way --

A No.

Q -- or another?

And so if he were to come in and testify that

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Libby asbestos ended up in vermiculite that went into a broad range of Grace's asbestos containing products, you couldn't comment on that one way or another?

A No, I could comment on it that there's a significant risk to people that are exposed to that compound.

Q Okay. Let's go back to your report. Put aside, at least for now, the CARD Clinic Web page printout, and you have the TDP over there.

Okay. You see at paragraph 22 in your report?

A Paragraph 22?

Q Paragraph 22, Page 10.

A I do.

Q You're describing the impact on asbestos disease due to Libby asbestos exposure. Do you see that?

A Yes.

Q In that paragraph, you're talking about the progression of non-malignant disease; is that correct?

A That's correct.

Q Okay. At the last sentence, you write, At the end stage, the patient is bedridden, oxygen

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a diagnostic workup on somebody.
Q But you mentioned two standard deviations from normal. Do you understand that basically 95 percent of the people are going to fall between 80 percent of predicted and 120 percent of predicted?
A Yeah, I think that's what it is, yeah.
Q Okay. Would you agree with me that if someone dies from -- well, how does the non-malignant asbestos diseases caused by Libby asbestos lead to death? What does it do physiologically to the person that kills them?
A It leads to a number of things. It leads to progressive shortness of breath. Most of them seem to die of -- not most of them, but a large number of them die of severe loss of lung volume, so they wind up with vital capacities in the 30 to 40 percent range of predicted or they wind up with diffusion capacities down to 20 or 30 percent.
So they either -- for the most part, either die of hypoxia with carbon dioxide retention or they die of what's called a cor pulmonale which is heart failure due to pulmonary hypertension disease within their asbestos disease.
Q But would you agree with me that the majority of people who die from a non-malignant disease caused

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by exposure to asbestos, at the end stage, they will have lung function test scores that are significantly below the lower limits of normal, at least on one of the three tests you mentioned?
A Well, most of the time. There have been rare examples of people that will have only modest degrees of loss of lung function and develop severe hypoxia associated with that because hypoxia does not directly correlate with the lung function test.
Q Meaning you can be -- you can still for whatever reason be able to get more oxygen in through your blood even if you have decreased lung function and, conversely, you can have not so significant lung function decline, but less oxygen in your blood?
A Right.
Q But for the majority of people who die from Libby -- you did something called the CARD mortality study, correct?
A Yes.
Q And I think the numbers are right here. Basically, you determined out of 186 people who had died who had at one time been diagnosed with an asbestos-related disease, that 110 of them, their death was caused in whole or in part by exposure to Libby asbestos; is that right?

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A Well, there was 110 of them that died either with lung cancer that was related to that or with pleural or interstitial disease. Asbestos disease was non-malignant.
Q Right. The 110 include people who died of cancer, right?
A It did.
Q Okay. And my understanding is of the 110, 76 of them died from -- and by that, I'll use quotes -- died from a non-malignant disease as opposed to a cancer?
A That's correct.
Q Okay. Of the 76 people who died from a non-malignant disease, would you agree with me that the majority of them by the end stage, but a few days before they died, if you measured their lung function, it would be well below 60 percent of predicted?
A Which numbers are you talking about?
Q Total lung capacity, forced vital capacity or DLCO.
A Yeah, well, I think that's probably right because we had almost 50 percent of them that had DLCO as their isolated abnormality and they may have had minor degrees of lung -- volume loss, but they

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had a very severe defusion defect.
Q Could you pick up the TDP which is an exhibit to your deposition? I'm not sure what number it is.
MR. LEWIS: Two.
Q (By Mr. Finch) Number two. I have reviewed your reports and your criticisms of the TDP. I didn't see any criticisms of the amounts of money that are scheduled to be paid on expedited review to people that qualify for various levels of disease; is that correct?
MR. LEWIS: Object. That's beyond his expertise. We're not talking about that question to this witness.
MR. FINCH: Well, let me just establish that.
Q (By Mr. Finch) You don't have any expertise in the dollar amounts that asbestos bankruptcy trusts pay to resolve asbestos personal injury claims, do you?
A No, they just -- they seemed a little bit paltry to me, but I'm not -- I'm not an expert in that.
Q Okay. And you're not an expert in what kind of values Grace paid when it was a defendant in the tort system, both to people in Libby and people

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A Other than that, I do not.
Q Do you understand that the TDP divides the non-malignant -- the Grace TDP divides the non-malignant diseases by severity in terms of the decline in lung function test scores?
A Yes.
Q Okay. So there's a low level criteria where it doesn't require any kind of lung function decline at all, correct?
A Right.
Q And that would be category one or category two, correct?
A And I'd have to look up all the categories again because there's As and Bs and --
Q Why don't --
A -- things like that, but, yes, take your word for it.
Q The 2004 ATS statement, if you could turn in there to Page 697.
A Okay.
Q The second full paragraph on Page 697 refers to something called HRCT. Do you see that?
A Second on which side?
Q On 697.
A Yeah.

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Q Second full paragraph begins, HRCT and detect early --
A Okay.
Q -- pleural thickening.
A I got it.
Q Do you see that?
A Yes.
Q HRCT refers to high resolution CAT scans --
A Yes.
Q -- computed tomography?
A Yes.
Q Okay. And then later on in the same column in the next paragraph, the 2004 ATS statement authors write, A proposal has been put forward for a classification system analogous to that of the ILO system for plain chest radiographs, but none has been widely adopted.
Do you see that?
A Yes.
Q This document was published in 2004. To your knowledge, has there -- well, let me back up.
What's your understanding of what's the ILO system for plain crest radiographs?
A Well, the ILO system is an epidemiologic study or was designed as an epidemiologic study for

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classification in both interstitial and pleural disease with a variety of diseases originally starting in pneumoconiosis and black lung and coal miner's lung and then has been extrapolated as asbestos disease subsequent to that.
Q Okay. And is it -- it is a -- it is a grading system for dividing chest radiographs for pneumoconiosis caused by exposure to asbestos and various categories, correct?
A Correct.
Q It's one of the things that it does?
A Yes.
Q And have you ever in your clinical practice or otherwise used the ILO system in describing a chest x-ray, what a chest x-ray shows to another doctor?
A Well, yes, I -- actually, the part of the ILO system that relates to interstitial lung disease, I pretty much agree with. That's the 1/0, 1/1, 2/1, et cetera, et cetera of interstitial disease. There's far more difficulty with the pleural disease, particularly as far as what people see and how they read it and things like that.
Q Okay. Would you agree with me that in reading chest x-rays generally, two people who are

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equally qualified and competent at reviewing x-rays can come to different conclusions as to whether or not the -- what the profusion level is on the ILO scale for purposes of interstitial disease?
A Yes, they can.
Q That's a phenomenon called interreader variability?
A True.
Q And would you also agree with me that same phenomenon, i.e., two doctors looking at the same x-ray that shows pleural disease can with the best will in the world come to different conclusions about what that x-ray shows?
A Yes.
Q But the -- do you have an understanding of how the ILO guidelines are promulgated?
A You mean originally or --
Q Well, originally and then -- let's back up.
They were originally put out in 1980, correct?
A Yeah.
Q All right. Do you have an understanding of how they came into existence?
A Oh, a bit, not a lot. They came in -- I'm not sure that I do know. I think they came about

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evidence in the literature that that -- there are more than one view of that, and for whatever reasons and I obviously wasn't privy to any of those discussions, they selected that piece of information as opposed to McCloud's article which very well details the incidence of blunting associated with diffuse pleural thickening.

And that amazingly correlates almost exactly with what we have in Libby in these people who died.

MR. BERNICK: I'm sorry. Your voice trailed off a little bit, Dr. Whitehouse. What corresponded almost identically with the --

THE WITNESS: Oh, the McCloud numbers correlate almost exactly with the Libby numbers for the incidents of blunting as a criteria for diffuse pleural thickening. We have all these people with diffuse pleural thickening that don't have blunting.

Q (By Mr. Finch) Okay. Mr. Bernick probably has lots of questions about diffuse pleural thickening and blunting, but I'm just asking you in general --

MR. BERNICK: Don't count on it.

Q (By Mr. Finch) In general, if someone followed the ILO guidelines requirement for saying that blunting would be required to define something

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as diffuse pleural thickening, that person would not be outside of the bounds of generally accepted medical practice, correct?

A Probably not.

Q Now, before we got into the discussion of blunting, there -- I'm still at the 2004 ATS statement. The statement says, A proposal has been put forward for a classification system analogous to that of the ILO system for plain chest radiographs, but none has been widely adopted.

Do you see that language?

A Yeah.

Q And what they're referring to is a proposal has been put forward for a way to grade HRCT in a way that is descriptive much like the ILO system is descriptive for chest x-rays, correct?

A Correct.

Q Okay. And this statement was put out -- well, the date on it is December 12, 2003, but that's almost six years ago.

To your knowledge, has there been a widely adopted way to classify high resolution CAT scans of the chest that is similar to the ILO system for x-rays?

A It hasn't been widely adopted.

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Q Okay.

A There is -- we actually -- other people in the CARD clinic are actually working on this and trying to develop something that is simple because the one that's out there takes over an hour to do a CT, and if you think about that, you can read a CT in about five or ten minutes and then you take an hour and -- it isn't going to happen.

Q Nobody would use it?

A Nobody will use it, no.

Q Well --

A That's exactly what's happened.

Q Okay. So, I mean, my understanding of the ILO -- the way the ILO system works is it's a big box with sample films in it that you can compare 1/1 versus whatever x-ray you're looking at to see how those two things line up. Is that basically how it works?

A Supposedly.

Q Okay. Supposedly and theoretically, that's how it works, right?

A Theoretically, that's how it works.

Q Okay. Some doctors follow that to a greater or lesser degree, right?

A I would agree with you on that.

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Q Okay. But -- and there's not something similarly developed yet where somebody can quickly and easily take a picture of HRCT and this is what a 1/1 should look like or the equivalent of this is what diffuse pleural thickening should look like and compare it to some kind of master image that is widely adopted or easy to use, right?

A No, there isn't anything out there like that yet.

Q Okay. On Page 697, there is a column -- in the second column, there's something called -- the heading is Pulmonary Function Tests. Do you see that?

A Mm-hm, I do.

Q The third paragraph in that section says, In addition to diminished lung volumes, the carbon monoxide diffusing capacity is commonly reduced due to diminished alveolar-capillary gas diffusion as well as ventilation-profusion mismatching.

Do you see that?

A Yes.

Q Okay. And then it goes on to say, Although a low diffusing capacity for carbon monoxide is often reported as the most sensitive indicator of early asbestosis, it is also a relatively non-specific

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talks about the 9,500 people --
A Right.
Q -- from Central Lincoln County?
So I take it that all of your opinions about pleural disease caused by exposure to Libby asbestos are valid only for the people who have asbestos-related disease, and you're not making any conclusions or analyses about the entire cohort people who were exposed to Libby asbestos; is that correct?
A Well, not really. I guess the best way to say that is that I'm sure that there are a fair number of people out there still that have not been discovered and may have abnormalities on their films, but I'm not drawing any conclusions about that because I haven't had a chance to study them.
Q Okay. So you're only drawing conclusions about -- your conclusions are only valid with respect to people who have already been diagnosed with asbestos-related disease; is that correct?
A That's correct.
Q All right. And then the second page of this, there's --
MR. LEWIS: Second page of what, Counsel?

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MR. FINCH: Second page of Whitehouse Exhibit-6.
Q (By Mr. Finch) You have stated in your report and elsewhere that there's approximately 1,800 CARD Clinic patients with asbestos-related disease?
A Yeah, that's the number that I got from the -- you know, the nurses that run the place about six months ago. They didn't have an exact number.
Q Okay. Would you expect that those 1,800 are largely overlapped with -- whether the exposed population was 9,500 or 6,600 or 10,000, that the 1,800 or the substantial majority of those people are a subset of the exposed population?
A I would think so, but there's a certain number of them that are not part of that Lincoln County population, above, anymore. They were at one time, but they're not now. They live -- there's a lot of patients in Spokane, in Missoula, in Kalispell, and some in Great Falls, and then we get patients all over the country coming back that used to live there, so -- and I don't know the breakdown in numbers. I have no idea what it is.
Q Okay. Could you go to the last page about this -- last page of Whitehouse Exhibit-6?
A Okay.

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Q Okay. Would you agree with me that your opinions about someone who has been diagnosed with an asbestos-related non-malignant disease as a result of being exposed to Libby asbestos, that that person would have a probability of death are based on the CARD mortality study?
A I'm only going to base that on the ones that I know more about which is the Libby claimants, the 950 there. I would point out one other point in this is that there's 1,800 clinic patients with a diagnosis. There's also another three or four hundred that have been screened and do not have disease.
Q Do not have disease?
A Do not have disease, but they're also part of the clinic.
Q But there's -- there's 1,800 people that are part of the clinic and there's 950 of them that are Libby claimants and you have more familiarity with that group than the 850 diseased patients that you see, but aren't the Libby claimants, correct?
A That's true and particularly since there's been a lot added in the last year or so and I've been working less up there.
Q And I believe I asked you this this morning,

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but you haven't done anything to compare and contrast either the type of disease or the severity of the disease between the 850 other patients and the 950 who are Libby claimants, correct?
A No.
Q You haven't -- you have not done that, correct?
A No, I have not.
Q Okay. And is it correct that you hold the opinion that someone who is diagnosed with a non-malignant asbestos disease caused by exposure to Libby asbestos is more likely than not going to die from an asbestos-related disease?
A Out of that 950?
Q Out of the 950 or the 1,800?
A Will you read -- repeat the question again.
Q Sure.
A I want to make sure I get it right.
Q Do you have an opinion -- do you have an opinion to a reasonable degree of medical certainty that for the 950 Libby claimants who have been diagnosed with a non-malignant asbestos-related disease, that each one of them is more likely than not going to die from an asbestos-related disease?
A The death rate, when we've gone through the

PP

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death certificates in all of these people, it's something like 57 percent -- or I think it was 52 percent on best information, 57 percent was significant association with asbestos disease -- I think that group of people has the same breakdown in percentages as the 950 -- approximately a third miners, and the balance are community members and family members. Community members are the majority -- I think you can make the extrapolation having looked at those people myself, that most of the people that died are my patients, looking at those, then we're going to see the same thing in the 950 and so that there is a high probability or not a high probability, there's probability that they're going to die more than 50 percent from asbestos disease.

Q Okay. What about related --

A And then add to that the cancers on top of it.

Q What about the 850? The 850 on this that aren't --

A The 850?

Q Yeah.

A I'm not going to draw any conclusions. I don't know anything about them.

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MR. FINCH: Okay. This would be a good time to take another break.

THE WITNESS: Okay.

MR. FINCH: I just want one for personal reasons. Why don't we come back in five minutes?

THE VIDEOGRAPHER: We're going off the record. The time now is 10:30 a.m. This is the end of disk number one in the continuing deposition.

(Recess.)

THE VIDEOGRAPHER: We're back on the record. The time is now 10:37 a.m. This is the beginning of disk number two in the continuing deposition of Dr. Alan Whitehouse.

(Exhibit-7 marked for identification.)

EXAMINATION (Continuing)

BY MR. FINCH:

Q Dr. Whitehouse, I've put what's been marked as Whitehouse Exhibit-7 in front of you.

A Yes.

Q What is that document?

A Oh, that's a -- that's a counting sheet that was done basically on the basis of Dr. Frank's and my reading all these x-rays and these people for pleural

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thickness, the non-malignant ones, the pleural thickness, the blunting plaques, et cetera. We did it independently.

(Ms. Bloom returns.)

Q (By Mr. Finch) Okay. Let me see if I understand this. You started out with 227 people who were CARD Clinic patients --

A Yes.

Q -- that had died, right?

A Died through last year.

Q Through last year.

And this is the mortality study that you're relying on for your opinion as to probability of death, correct?

A That's right.

Q All right. Then you excluded 41 of them for various reasons, correct?

A Well, basically, they either didn't have any asbestos diagnosis to begin with, we didn't have a death certificate, couldn't get one, didn't have a chart, didn't get chest x-rays. There's a lot of reasons why, but unless we had a fairly complete set of data, we didn't -- they weren't included.

Q Okay. And that left you with 186 people?

A Right.

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Q And then of that, 34 of them died of mesothelioma or some other asbestos-related type cancer, right?

A Mm-hm, yes.

Q And then you got 76 that were nos and 76 that were yeses, right?

A Yes, exactly the same number. Sort of odd.

(Mr. Longosz returns from recess.)

Q (By Mr. Finch) What is it -- what is it -- who determined what versus a yes or a no? That was you?

A And Dr. Frank.

Q Well, he testified that he looked at the x-rays on the 76, but that you made the determination as to whether or not --

A Well --

Q -- there was a -- the death was due to an asbestos-related disease?

A Yeah, actually --

MR. LEWIS: Just a -- just a second. Object to that on the grounds it's not put in a form of a question and it's just a comment on Dr. Frank's testimony and should be strickened from the record.

MR. FINCH: Let me rephrase the question.

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Q Okay. Is it true that with respect to your experience in seeing people with asbestos-related illness not related to Libby that you have published no papers?
A No, I have published no papers.
Q Is it also true that with respect to those people you have not provided or you're not aware of anybody who's provided medical files relating to those people to anybody involved in this bankruptcy case?
A No.
Q Is it true? Is what I said true?
A That's correct. That's correct, yes.
Q Is it true that in connection with your work on this case and the reports that you've done and the testimony that you've offered that you've provided -- presented no data relating to patients that you've seen with asbestos-related illness unrelated to Libby?
A That's correct.
Q Okay. And I think you said in your own words this morning that pretty much you've studied strictly asbestos disease in Libby; is that correct?
A Not entirely. I read pieces of literature over the years, but the -- most of the work that I

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did concerning those people with chrysotile exposure was pretty well before the Libby thing all broke, and so there wasn't any driving force for me to maintain data or anything like that.
Q Okay. But let me -- that's fair and let me just ask you this question: Is it accurate that you've not done any scientific analysis of diffuse pleural thickening in any patient population outside of Libby?
A That's true.
Q Let's talk a little bit about diffuse pleural thickening in the literature which, of course, is going to relate to folks outside of Libby, right?
A Most of it does, yes.
Q Well, there's not any -- there's no published literature about diffuse pleural thickening in Libby specifically, correct?
A That's correct.
Q So if we want to talk about diffuse pleural thickening in the published literature, we're talking about that disease as it's been studied and published for people outside of Libby, fair?
A Yes.
Q Okay. Would you agree that diffuse pleural thickening is a distinct diagnostic entity?

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A Well, it's treated as such in the literature. There's obviously confusion in that literature though in that there's data or reports concerning confluent pleural plaques and their effect on lung function which makes you wonder whether -- about that -- where does confluent pleural plaques leave off and diffuse pleural thickening begins. It sort of sounds like the same thing, but it is treated pretty much as a separate disease in the literature.
Q I asked -- I just asked Dr. Frank, I said, is it true that the scientific literature defined a diagnostic entity called diffuse pleural thickening at least as of the 1970s and without relationship to Libby, Montana, and his answer was yes.
A I would concur with that.
Q Okay. And, in fact, we can go throughout the literature during this whole period of time and whether or not diffuse pleural thickening is defined to include what you called confluent plaques or not, the literature has regarded diffuse pleural thickening as a distinct diagnostic entity, fair?
A That's fair.
Q Okay. Is it also true that diffuse pleural thickening has been studied scientifically over those years at least since the 1970s?

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A Yes.
Q Is it true that there are papers that have been published and presented that specifically focus on the pathology or pathological presentation of diffuse pleural thickening?
MR. LEWIS: Objection. That's a compound question.
Q (By Mr. Bernick) Go ahead and answer.
MR. LEWIS: Which is it? Which question do you want him to answer, Counsel?
MR. BERNICK: I don't think it's compound.
Q (By Mr. Bernick) Do you understand the question?
A No. Why don't you repeat it, please?
Q Is it true that there are papers that have been published and presented focused specifically on the pathology or pathological presentation of diffuse pleural thickening?
A I'm sure there have been.
Q Is it also true that there are papers that have specifically sought to measure the effect of diffuse pleural thickening on lung function?
A Yes.
Q Okay. Now, I first want to talk about

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Q If I were to ask you about different results and different studies, that is, when does diffuse pleural thickening lead to a measurable loss of lung function or not, would you be able to tell me the different studies and their different results on that very specific issue?
A You mean you want me to actually quote an article and what the article says?
Q I want you to be able to talk with me about it in the deposition because I really want to know if you hold yourself out as an expert in the differing results that have been seen when data has been gathered on the impact of diffuse pleural thickening on lung function.
MR. LEWIS: You finished?
MR. BERNICK: Yeah.
MR. LEWIS: Objection. That's not a question. That's a statement of counsel. I move that it be strickened.
Q (By Mr. Bernick) Can you hold yourself out as an expert in the differing results that have been recorded in the scientific literature when scientists have asked what is the impact of diffuse pleural thickening on lung function?
A Well, to begin with, I don't use the term

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expert related to myself particularly. I basically am a longstanding practitioner with very extensive experience in lung disease and very extensive experience in Libby disease and I have read a lot of literature concerning diffuse pleural thickening that I have utilized in formulating my opinions. Now, I don't guess that that would be considered systematic, but that's the way it is.
Q Fair enough. And I've always recognized that you are candid in responding to questions and get to the point. That is my point. We're going to get to the Libby experience in a minute, but I'm talking about your -- I'm talking about your expertise in what's been reported outside of Libby.
Do you consider yourself to be an expert in the science, the scientific results of what's been reported outside of Libby when it comes to the impact of diffuse pleural thickening on specific lung function tests?
A I think I'm knowledgeable about what's in the literature relative to that.
Q But do you consider yourself to be an expert in what's in the literature with respect to that?
A I told you before, I don't use the term expert --

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Q But a lot of other people do, people in your field.
A Well, I don't.
Q Well, I'm just asking you: Do you consider yourself to be a person who can speak authoritatively to what all the literature says outside of Libby about the impact of diffuse pleural thickening on specific lung function results?
A You used the term all the literature, and, no, I have not read all the literature, every piece of the literature. I've read a substantial portion of the literature. I don't even know what the percentage is.
Q So you don't know what you don't know?
A Yeah, I think I know what I don't know.
Q Okay.
A What I don't know is -- also gets quoted in a lot of these articles you read. What I haven't -- I shouldn't say don't know. What I haven't read necessarily is also summarized in a lot of these articles.
Q Okay. So if you give answers to my questions today about when and under what conditions does diffuse pleural thickening actually cause a substantial reduction in lung function, you and I can

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have a dialog on the actual data that's in the literature and you'll be able to respond? You're being held out as an expert in this case. You'll be able to respond to that as an expert; is that fair?
A I can respond very accurately to what happens in people in Libby, what happens to their pulmonary function relative to diffuse pleural thickening. I'm not going to make any attempt to summarize what happens in the chrysotile world in that regard.
Q Can you make any attempt to summarize what happens in the non-Libby -- you pick out chrysotile. I'm not just focused on chrysotile. I'm --
MR. LEWIS: Counsel -- Counsel --
(Simultaneous talking.)
MR. LEWIS: I've got the floor now. Don't argue with this witness. You'll have great latitude. I understand this is cross-examination, but just answer the -- ask questions, let the witness answer. Don't make speeches, please.
Q (By Mr. Bernick) Was your last answer confined to chrysotile as opposed to amphibole?
A Basically, I have reviewed a great deal of literature relative to amphiboles and diffuse pleural thickening, particularly the Australian literature which has a lot of information in it. I don't know

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A So I don't know whether that's actually below the range of normal or not, but it's got to be very close.
Q Well --
A He reported it as such.
Q Okay. Are you sure that that's ten percent?
A Pretty close to it.
Q Not pretty close. You're here as an expert. Do you know?
A 4.09 and 3.16, okay, it's -- it's about eight percent.
Q Eight percent?
A Maybe nine percent.
Q Does that reflect -- does that reflect that the resulting loss of lung function is below the range of normal?
A It all depends where the first one started. Depends what 4.09 liters plus or minus .91, whether that is actually, indeed, 100 percent or whether it's a population of which the -- everybody was 90 percent of predicted. Depends on what the normal values he used.
Q So that's my whole point.
Can you tell me as an expert today of a single study which shows that plaquing alone results

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in a loss of lung function below the range of normal?
A No, I probably can't, although I think that this demonstrates significant loss.
Q But I didn't ask you about significant loss. I'm talking about severe loss.
A Well --
Q This talks all about severe --
A No.
Q -- loss.
A Not with plaquing alone. Diffuse pleural thickening, yes.
Q Well, diffuse pleural -- I want to make sure that we don't have a problem there either.
Can you tell me of a single study anywhere which shows that confluent plaquing results in a severe loss of lung function?
A No, and I don't think he discusses that in this article either.
Q Can you tell me a single study anywhere that shows confluent plaquing results in a loss of lung function below the range of normal?
A I'm not aware of any.
Q Now, let's talk about blunting.
A Yes.
Q Blunting is associated with a substantial

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loss of -- strike that.
Blunting can be associated -- I don't like that one either.
If you take a look at the studies, there are studies that focus specifically on the association of blunting with loss of lung function, correct?
A Well, they're associated with diffuse plural thickening and you're using that as part of the definition.
Q Yes. Well --
A I'm saying that if you don't have --
Q I'll rephrase my question.
A -- blunting, you don't have diffuse pleural thickening.
Q You're correct to correct me, so I'll rephrase the question.
There are studies that look to examine whether the diffuse pleural thickening associated with blunting of the costophrenic angle leads to or is associated with a loss of lung function, correct?
A Yes, there's more lung function in that group, yes.
Q Okay. And those studies do show that diffuse pleural thickening associated with a loss of blunting of the costophrenic angle can lead to a loss of lung

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function that is both significant and severe, correct?
A That's correct.
Q And, in fact, produces a reduction of lung function to below normal ranges, correct?
A That's correct.
Q Would you, therefore, agree with me that the diffuse pleural thickening associated with blunting of the costophrenic angle has a clear track record of being associated also with very severe impairment?
A Yes.
Q And is it also true that it is for that reason -- I'm not here to debate with you whether the definitions are good or bad, but would it be fair to say that it's for that reason that some scientists have decided to define diffuse pleural thickening by including in the definition blunting of the costophrenic angle?
A I suspect that that may very well be the reason why they decided to do so, but what I've been saying and what's in the data that we produced is that we've got about half of these people that died with diffuse pleural thickening and there was no blunting, and by definition then, they don't have it, so that's crazy if you have a definition that doesn't

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A I think reasonably, yes.
Q Okay. And by the same token, this test that is in the TDP for severe asbestosis will exclude people both inside and outside Libby that some might say based upon a different test, in fact, have severe asbestosis. We're in agreement about that, correct?
A Yes.
Q Okay. Now, the people outside of Libby who are excluded will include people who have low DLCO scores, right?
A Correct.
Q Will exclude people who are not 2/1s, but maybe, you know, 1/1s but has severe impairment. There will be borderline cases outside of Libby, right?
A Yes.
Q And with the borderline cases, are you familiar that in the trust distribution process, they'll have the opportunity for individual review?
A I understand that.
Q And you understand the same thing will be true with people of Libby?
A Yes, I think one of the things that really disturbs me about that is it's not a physician that's reviewing it. It's not a pulmonologist.

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Q Okay.
A A pulmonologist is really knowledgeable about asbestos. That would make a lot of difference to that.
Q But that's true outside of Libby and it's true inside of Libby, correct?
A It ought to be.
Q Throughout -- well, I understand that, but that criticism that you have of individual review applies both outside and inside of Libby, right?
A Yes, it does, but the same thing that I just said about it holds true is that, how can a non-physician, somebody that's not really knowledgeable about asbestos diseases by having dealt with it on a regular basis make that kind of a decision.
Q I want to take a look now at the TDP for severe disabling pleural disease level 4-B, and my questions are really very much the same, which is that this is a TDP that seeks to pick out people with severe disabling pleural disease by both of imposing a test for the presentation of the disease as well as by imposing a test for severity of impairment, fair?
A Yes.
Q Okay. And when it comes to the diagnosis,

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would you agree with me that when it comes to tests for the presentation of the disease that science says that where people meet that test, it's pretty clear that they do have diffuse pleural thickening?
A How they answer this question is --
Q It's where the test is met.
A Well, I think you may be right about that, where the test is met.
Q That's what I'm asking.
A But the test itself has some severe limitations and problems with it.
Q I'm not really going to debate that with you in the questions I'm asking you right now.
A Okay.
Q I'm asking you the same kinds of questions that I asked you about when it comes to severe asbestosis, that is, the tests that are imposed by the TDP for severe disabling pleural disease, for the diagnosis of it, those are tests that science says if they're satisfied, the claimant will be a pretty clear case of having severe disabling pleural disease, correct?
A Yes.
Q The same thing is true with the impairment requirements for level 4-B, correct?

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A Correct.
Q Okay. So we take a look at the TDP for severe disabling pleural disease, is it such that science says that where it's met, those will be pretty clear cases where people, in fact, have that disease, fair?
A If you concur with the entire body of science.
Q Yes, that is, if we look at the entire body of the science, that science --
A If you agree with that.
Q Oh, no, I'm just saying -- I'm saying again, just like I did with severe asbestosis, that science says with -- where these tests, in fact, are met, people who satisfy those tests are highly likely -- are clear cases where they have severe disabling pleural disease. Not saying they're the only ones, but once they meet the tests are going to be pretty clear cases under the science; is that fair?
A Okay.
Q Is that -- I don't want an okay. Is that right?
A Yes.
Q Okay. Now, we also know as we went through with severe asbestosis that the test for severe

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disabling pleural disease level 4-B will, in fact, exclude people outside of Libby who some might say -- doctors might say, in fact, have severe disabling pleural disease, right?
A Yes.
Q And it will also exclude people within Libby who you would say have severe disabling pleural disease, correct?
A Yes.
Q And I think what you said this morning is that if you took a look at the McCloud study, the McCloud study relates to people who are outside of Libby, right?
A Yes.
Q And I think you said that under the McCloud study more than -- more than 50 percent of the people in the McCloud study wouldn't pass the requirements of level 4-B in the TDP, right?
A Right.
Q When it comes to people within Libby, I think you said that the TDP would have the effect of excluding about the same proportion of people in Libby with severe disabling pleural disease as was reflected in the McCloud study, correct?
A Pretty much.

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Q Okay.
A Close to it.
Q So we're talking about roughly the same proportion and effect of the TDP both inside Libby based upon your own experience and outside Libby based upon the McCloud article. Did I get that right?
A Yeah, on the basis though or the caveat I would say about this is on the basis of just that aspect. We're not talking about DLCOs or anything else. Just about --
Q Blunting?
A Just about blunting.
Q Okay. So when it comes to the blunting criteria in level 4-B, that has the same proportion and effect inside Libby as outside Libby, fair?
A Very similar.
Q Okay.
A Very close.
Q Now, if we wanted to include --
MR. BERNICK: Why don't you just change it now?
So for people outside on the telephone, we have a conspiratorial process here inside the room called changing the tape.

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THE VIDEOGRAPHER: We are going off the record. The time is now 1:15 p.m. This is the end of disk number two in the continuing deposition of Alan Whitehouse.
(Pause in the proceedings.)
THE VIDEOGRAPHER: We're back on the record. The time is now 1:17 p.m. This is the beginning of disk number three in the continuing deposition of Dr. Alan Whitehouse.
EXAMINATION (Continuing)
BY MR. BERNICK:
Q Dr. Whitehouse, if we -- strike that.
If DLCO were to be included as an alternative basis for qualifying people for severe disabling pleural disease -- I think you've already recognized in response to Mr. Finch's question -- that if that is the only evidence of impairment of lung function, that is, it's really truly an alternative way for people to qualify, that would have the effect of allowing people to qualify where the cause of the lower DLCO was unrelated to asbestos, correct?
A Well, I think that could easily be.
Q How?
A Well, for several -- several reasons. First off, those people have over-disease (sic). Okay?

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They have big exposure histories, generally. They may or may not have some small degree of interstitial disease. They're very limited and that can be proven, with the treadmill or with being on oxygen and hypoxic or whatever the case may be, and ordinarily, most of those people have significant abnormalities in their pulmonary function, although they may not be below 65 percent. They're in that range though, some -- frequently.
So there's very ample diagnostic evidence that that's the source of it, and then if the CTs were looked at, almost all of those people have some pleural fibrosis that you can't see on x-ray and explains their DLCO and it's clearly asbestos related.
Q Yeah, but I'm getting at a different thing.
If this expedited review -- that's what the TDP review speaks to -- expedited review where the submission is done on paper and there are written criteria which if met, you're in, and if you don't meet them, you're not in. That's the -- that's the world that we're operating in.
If you were to make DLCO an alternative measure for the impairment of lung function such that somebody who didn't meet the requirements based upon

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forced vital capacity still could qualify for DLCO, how would you state objective criteria that -- so they could check off that would eliminate the cases where DLCO is reduced for some source, some reason that's not asbestos? How would you do it?

A I don't think it would be difficult at all. You'd basically say that there's pleural disease present. Everybody -- that everybody agrees that there's pleural disease present. They have abnormal pulmonary function. I don't think you have to put it with normal pulmonary function in that situation, but you have to recognize that some of those people will be right around 65 percent.

You could -- this is the one situation where a CT evidence would help you a great deal and then, say, that there's no other obvious reasons for there to be a reduced DLCO.

Q So that's how you would write it?

A I'm not sure exactly how I'd write it. Never even thought about that. But, roughly, I could write something that would cover those people and would protect the TDP from people that don't have significant asbestos disease.

Q And it would be such that somebody, not a doctor, could review it and say --

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A Yeah.

Q -- that's right, it's all set? They wouldn't have to read the CT scan?

A Just a check off and all, yeah.

Q It's not in any of your reports, correct?

A What's that?

Q That's not in any of your reports, is it?

A No, I don't think I've ever put that down on paper. That's the first time anybody's actually asked me that.

Q I asked you.

A You asked me. I could do it and it would be -- I wouldn't want it to be unfair. I mean, you know, I spent -- this is a digression a little bit, but I spent years doing disability evaluations for the State of Washington and was very successful in it because my track record was one of being right in the middle of the road. You know, I wasn't about to go along with somebody that didn't have it, and so it was pretty even. Now, that's not always the case with IME docs, but that's possible to do that and to write it in such a way that it could be done.

Q Let's talk about the Libby data and what the Libby data shows about that. Okay?

As I understand it, there are two basic

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collections of data that are Libby specific and -- are Libby specific and focus on non-malignant disease caused by asbestos.

You have the ATSDR data and then you have the CARD Clinic data; is that right?

A Yes.

Q Now, the ATSDR data, would you agree with me, that ATSDR was an independent organization when they came in to gather that data at Libby?

A You know what I'm going to ask probably about the ATSDR. Are you talking about the original Sullivan study?

Q I'm talking about the original gathering of the data. I'm not here to talk about authors of studies or anything. I'm talking about data. All the questions I'm going to ask you are all about gathering data.

A Oh, okay.

Q The ATS -- the data that the ATSDR gathered, that collection of -- you've got two collections of data, CARD Clinic data, ATSDR clinic -- ATSDR data, right?

A Yeah. You're talking about the x-ray data from the screening --

Q Yes, the screening --

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A -- that one?

Q -- the screening data.

A Right. Okay.

Q So when it came to the -- are you aware of any other basic collection of non-malignant data at Libby beyond the ATSDR and the CARD Clinic?

A No, only insofar as the radiologist in Libby, Steve Becker, who is a reasonably accurate reader as far -- and was part of that reading with the ATSDR, so I guess you'd have to include him in that.

Q Okay. So now the ATSDR data was gathered by people who were independent, correct?

A Yes.

Q The ATSDR data was gathered pursuant to an established protocol that had to be followed the same way for all people, correct?

A I think so, yeah.

Q The ATSDR data is all available to constituencies of people in this case, correct?

A Yes.

Q There are studies that have been published on the ATSDR data, correct?

A That's correct.

Q And the ATSDR data is -- would you agree, representative of the disease picture or pattern in

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Libby?
A We have to be sure what part of that you're talking about and what part of it was published and by whom.
Q Not talking about published, just talking about the data.
The screening data that was gathered, that's a representative collection of data when it comes to representing the pattern or picture of Libby?
A At the time it was, yes, I think so.
Q Okay. Now, with respect to the CARD Clinic, I want to ask you the same kinds of questions.
Would you say that the data was gathered for the CARD Clinic by people who were in all cases independent?
A What do you mean?
Q Didn't have any other agenda.
A I think generally that's true. I think that pulmonary function data and chest x-ray data, which includes Becker's as well as our readings in there, I think was pretty consistent and I don't -- it wasn't biased, I don't think.
Q Well, that's what I'm asking. It wasn't biased?
A Huh-uh. (Answers negatively.)

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Q But when it comes to protocol, there's no protocol that was followed by the CARD Clinic in gathering the data that is in their files, correct?
A Well, yes, there actually is because when the people came in from screening, they took an interval history from them. Some of that was done by nurses. A lot of that is in a database now. They had a new chest x-ray taken. They had pulmonary function taken that the doc saw and there's a dictated note concerning the medical care, so --
Q But that's a --
A -- it closely all followed the same. There's more than one doc, but it was --
Q Different doctors --
A -- similar.
Q -- you know, when it came to the pulmonary function test, how it was administered, was there an absolute set protocol on how the pulmonary function test was to be administered with respect to all people who are part of the CARD Clinic data?
A I think pretty much so. It's pretty much the same protocol that I used in my practice for years. I trained those people up there.
Q Is it written?
A Yeah, certainly.

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Q Where is it written?
A In the -- in the procedure manual for the -- for the -- for the lab.
Q For the lab?
A I don't know where it is, but I know it's up there.
Q Okay. But what about when it comes to taking exposure history? Is there a --
A They don't take the exposure histories. The techs don't.
Q Oh, you mean the CARD Clinic?
A The other people in the CARD Clinic?
Q Yeah.
A Yeah, those are taken both by the --
Q But is there a written protocol?
A Yeah, there is for the nurses. There's a written protocol.
Q Do you know, were those ever made available publically?
A I don't know, but I know that there's a series of forms that they use concerning that. There's both a check list and then things that they can add on in handwriting as well, and that's been used -- and those are in everybody's chart, and they've been used pretty much since the inception of

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the clinic in --
Q What about --
A -- 2000.
Q What about in reading x-rays? Is there one protocol that's been followed in reading all x-rays at the CARD Clinic?
A Probably not. They're all read by -- they were all read by the radiologist at the hospital.
Q But different radiologists?
A No, all the same one, pretty much.
Q All the same one?
A Yeah, he occasionally had to cover it, but not very much. For a long time, I over-read most of the x-rays there --
Q When you read --
A -- but not anymore.
Q I'm sorry.
When you read the x-rays, you didn't read them always according to the ILO classifications?
A Oh, no, never did.
Q Well, that's what I'm saying.
There wasn't one procedure that was followed by the radiologist in reading the x-rays, fair?
A As far as ILO is concerned, no, we didn't use ILO at all.

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A Would I?
Q Have you.
A Have I? I have not accessed it. I assume that I can.
Q What about Dr. Frank?
A No, probably not because he's not really a member of the CARD staff which I am, of course.
Q And certainly that database has not been available -- the electronic database has not been made available to the parties in this case, correct?
A I don't think it's been used except to collect the data for the present time.
Q Well --
A But I think it's up to date and I think it's got a lot of data in it, but I don't know when it's going to be accessed. Probably in the next year when the EPA -- when it comes in.
Q If there were -- if there is a unique form of diffuse pleural thickening that's evident in people in Libby, should we be able to see it if we study the ATSDR screening data?
A No.
Q Just not apparent at all?
A Won't be apparent unless you follow people longitudinally and you have physician input, but

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there's no physician input to the ATSDR screening.
Q Okay. Likewise, if we look at the CARD information, would you say that there's no way to see any unique form of diffuse pleural thickening at Libby unless you have access to the details of the charts?
A Well, first off, I object to your term unique which is something that Grace has managed to --
Q Well, I'll withdraw the -- I'll withdraw.
A Let's leave that word out of it because it's not unique.
Q Okay. Well, then let me -- that's fair. Let me then ask you the question.
Dr. Frank has told us under oath that he does not believe that there is a different disease or a special disease or form of disease, pleural disease in Libby. It's just the same disease. Would you agree with that?
A Well, I would agree that it's basically the same disease that has been occasionally seen in chrysotile, but the frequency of it and the predominance of it and the progression of it to death is different.
Q And we're going to pursue that, but I want to peel this off layer by layer. We're going to take

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each one of those layers and peel it off and distinguish it.
So let's begin -- recognizing what you just said, let's begin with how diffuse pleural thickening, severe diffuse pleural thickening -- that's the only kind of pleural thickening I want to talk about -- severe diffuse pleural disease. Let's talk about how it presents itself --
A Okay.
Q -- in Libby, and I want -- what I want to know is: In the objective presentation of severe diffuse pleural thickening at Libby, tell me whether and how it is different from diffuse pleural thickening, severe, outside of Libby.
MR. LEWIS: Object to the form of the question.
A Rarely had I ever seen diffuse severe pleural thickening outside of Libby. I know it's described. People have seen it. It's been reported. Pleural deaths have been reported.
As I mentioned before, the rapidity of its progression as part of it, that's clear to me, and progression on to death which is rarely ever described and we've had a number of those, and then the other factor, I think, that we haven't even

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discussed is the fact that a number of people have extremely severe functional abnormalities in pulmonary function, but pleural thickening is not that thick, and that basically it's two to three millimeters in thickness, but is everywhere and results in incredibly severe physiologic consequences. That's one of the things we saw in that mortality study is people that died from that, of pleural thickening, so I don't know if that answers your question now, but --
Q (By Mr. Bernick) Yeah, it does.
A -- those are the differences.
Q It does. That's fine.
When you think about how the Libby pleural disease, severe pleural disease is different, those are the three things that you would recite: The fact of the rapidity of progression, progression to death, and the fact that in some cases the pleural thickness is not as pronounced as you would see outside of Libby?
A Yes.
Q Okay. Now, of all of those, we're going to take -- we'll just take them separately, so I want to put to one side now rapidity of progression and progression to death and just talk about the one that

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and pulmonary function and I'll have to look it up and I'll get it to you. There's no way I can remember it now and I'm not even going to try.

Q See, I can't deal with that. I'm taking your deposition today.

A Well, I can't give it to you because I don't remember. Okay?

Q Okay.

A And you'll have to live with that.

Q But how do you know -- well, actually, let me just ask you: What do you think -- let's go back over this for a second. We talked about the difference in the thickness of the pleura, right?

A Mm-hm. (Answers affirmatively.)

Q And you said you think that the people at Libby present differently with diffuse pleural thickening because they have severe impairment with -- even though their pleura tissue is thinner than what's reported in the literature.

When you made that comparison, what did you assume the thickness was that was reported in the literature for people outside of Libby?

A No, I was -- I was using for comparison the plan's three millimeter.

Q Oh, you mean the TDP?

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A Yeah, the TDP is three millimeters is what I was using.

Q Well, what if we set the TDP to one side and simply said, Dr. Whitehouse, I want to know whether you've determined based upon scientific study that there's a difference in the presentation of diffuse pleural thickening at Libby versus elsewhere. Forget about the TDP. I just want to know whether you've determined that the presentation is different than Libby elsewhere. Could you tell me that what you've seen in Libby in terms of the thickness of the pleura on presentation or severe diffuse pleural thickening is different from that same feature reported in the literature?

A Yes, much more frequent.

Q Not frequent.

A Hey, that counts for a whole lot.

Q I'm not --

A You have to look at it that way.

Q No, no, no, no, no, no, no. I just want -- I want you to tease out here -- very important -- how it looks.

Do you know -- do you know based upon scientific data that the presentation of diffuse pleural thickening at Libby is different in terms of

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the thickness of the tissue from how it is has been reported, the thickness that's been reported outside of Libby in the scientific literature?

A I haven't -- I doubt it's any significant difference because it's -- I think it's more a matter of degree or more the matter of frequency than it is the amount of degree. I'm sure you can find the same thing in -- outside of Libby in people if you look for it. That's all.

Q Okay. Now, have you done the scientific analysis to say, I've measured and determined that the frequency of thinner pleura in Libby people is greater than the frequency reported in the literature? Have you done that?

A No.

Q What about when it comes to low exposure? Low exposure has been reported. We know low exposure has been reported as a source of diffuse pleural thickening outside of Libby, correct?

A Yes.

Q Do you know that the -- have you actually scientifically determined that the frequency of reporting of severe diffuse pleural thickening at Libby is actually higher than the frequency of reporting of diffuse pleural thickening with low

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exposure outside of Libby? Have you determined that scientifically?

A No, it hasn't been reported yet.

Q It hasn't?

A It hasn't been reported.

Q When it comes to the frequency of blunting of costophrenic angle, Libby versus outside of Libby, have you determined scientifically that the rate of reporting outside of Libby is different?

A Well, the literature indicates that -- not the literature, but the Amelia* article, et al., says that you shouldn't have diffuse pleural -- they call it diffuse pleural thickening and it's --

Q I know.

A But that's --

MR. LEWIS: Now you've got to let him finish his answer.

MR. BERNICK: Come on. Come on, Tom.

MR. LEWIS: No. Wait. Wait. Wait.

MR. BERNICK: We've been getting along fine.

MR. LEWIS: Wait. Wait. Wait.

MR. BERNICK: We've been getting along just fine.

MR. LEWIS: That's because you were not

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So what I want to know is: Can you -- do you have scientific data on the basis of which you could say the rate at which diffuse pleural thickening has been found, severe, without blunting at Libby is different from the rate that appears in the scientific literature outside of Libby for severe diffuse pleural thickening without blunting?

MR. LEWIS: Well, objection. That assumes facts not in evidence.

A Let me answer the question first. Obviously, the ILO said that those doctors were wrong, that that wasn't diffuse pleural thickening. It can't be diffuse pleural thickening. There's no blunting, so they were obviously wrong. Amelia's right. We're right with -- with your plan here. No, that's -- that's clearly the answer because when they changed the ILO standards and said you can't have diffuse pleural thickening without blunting, they basically said to the guys before them, you guys were wrong.

Q (By Mr. Bernick) I don't --

A That's the answer to it.

Q Well, that may be your interpretation, but I want to know data.

A I don't know what, if any, of that data is in any of that. I don't know what it is. I'm not very

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interested in it and I don't know what the data was --

Q What about --

A -- what the percentage was. I know what McCloud's was. It was about 45 percent.

Q Right, which is comparable to what you found, right?

A Yeah, it is.

Q Okay.

A But he basically was told, you're wrong, because it's -- that's not the way it works.

Q So at least will you agree with me that the -- that you can say that with respect to McCloud, he found a comparable rate of severe diffuse pleural thickening without blunting is what you found in Libby, correct?

A Yes.

Q And do you have any reason to believe that -- do you believe his data is wrong?

A No, I don't believe his data is wrong. I think Amelia's data is probably wrong.

Q Okay. Now, when it comes to -- when it comes to exposure outside of Libby, would you say the same thing, that is, you found severe diffuse pleural thickening associated with low -- low exposures at

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Libby, do you know that that is -- do you know scientifically that that is unique to Libby?

A Well, you know, obviously, McCloud's report is chrysotile outside of Libby.

Q Outside Libby?

A Sure.

Q And so that would be consistent, that is, what he observed outside of Libby with respect to low exposure is consistent with what you observed at Libby with respect to low exposure, correct?

A Yes.

Q Okay. Now, when we talk about progression -- when we talk about progression, you've got cases involving progression that are in your report and it's the eighteen in tab six of Exhibit-1 to this deposition, and you've told us we've got to go back and take a look at the files, and if we have, we will, but I want to know on the basis of what test you can say that the rapid progression that you've observed at Libby for severe diffuse pleural thickening is different from the progression that's been observed outside of Libby on the basis of what test you say Libby is different from non-Libby.

A The rapidity of it.

Q Yeah, but measured how? I want to know what

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measurement you used to say that the rapidity of Libby is different from the rapidity outside of Libby.

A Well, the literature, not only in general, but all the literature indicates it's a slow progressive disease and all of it's directed towards that. And this sort of phenomenon, to my knowledge, has not been reported in the literature.

Q Have you looked to see --

A Yes.

Q Have you looked --

A Yes.

Q -- for the data on progression of severe diffuse pleural thickening outside of Libby? Have you looked for it?

A Well, first off, this -- I didn't say this was serve disease. I didn't say this progressed to severe pleural thickening. That was your term.

Q And that's pointing to Exhibit-6 of Exhibit-1 --

A I didn't say that.

Q -- is that right?

A It's your term. You made that assumption. I just said they rapidly progressed.

Q Okay. Well, then I will -- then I will

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Q But -- but did you pick them out -- did you pick them out -- well, strike that.
Progression is something that you can look for throughout your patient population, right?
A Sure.
Q And if we looked for progression for people who have a non-malignant disease in your whole patient population and we gathered all the data, would we see a pattern of progression that's different from what we see in the literature?
A Probably. With other diseases, you mean?
Q With other non-malignant diseases. Your non-malignant disease population at Libby.
A Sure.
Q If we took a non-malignant disease population outside of Libby and we said how have they progressed, Libby, non-Libby, would you see an overall pattern of progression in Libby that is different from progression outside of Libby?
A Well, to my knowledge this is not described in -- outside Libby either. There are diseases that progress rapidly that are non-malignant. Emphysema can do that. Emphysema will progress --
Q Well --
A -- quite rapidly.

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Q I'm -- you picked out 18 cases or 22 cases, right?
A Well, they sort of picked themselves out.
Q Right, but they are -- they are a very small subgroup of the total population of people that you've seen with non-malignant disease at Libby, right?
A That's true.
Q And, indeed, they are the ones who are probably most dramatic and pronounced when it comes to progression, correct?
A That's correct.
Q Now, if you go to the populations outside of Libby where you say the progression has been slower, are they these very select populations like yours here, 18, 22 people selected or are they larger groups of people?
A Well, you know, this is a selection of 22 out of the whole clinic population. The studies that I've seen, particularly from Australia which I read on a fairly regular basis because there are many similar problems that they have, they have very large case studies here and most of their studies -- not most of them, all the studies that I've seen out of there related to progression relate to slowly

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progressive disease. Now, that's not to say that they don't have some and they haven't published it. I have no idea.
Q Well, but that's the whole point is that if you had done a study that included not just the most significant or pronounced cases at Libby, but the broader population, that would then be comparable to studies outside of Libby working with larger populations, right?
A No, because I think that anybody that was dealing with this on a regular basis that wrote papers or was in a research facility or whatever it is would take note of this and write this up --
Q I didn't -- Dr. Whitehouse --
A -- in a separate paper, not as --
Q That is -- that's a what or a would or a maybe. I just really want to know what we know. Okay?
A Well, it's no more of a would or a maybe than what you said.
Q No, not at all. I'm asking for a fact.
If you take -- if you want to make a comparison of Libby, non-Libby, you have to have studies that are comparable in scope, right?
A Mm-hm. (Answers affirmatively.)

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Q I'm sorry?
A Yes.
Q Okay. And so if you have a study inside of Libby that's a large population of people with non-malignant disease and you want -- and you ask what's progression like and you record the result, if you want to know whether the same thing is true outside of Libby, you'd have to have a study that picks out a large population and the study is done in the same way, right, apples and apples?
A Yeah.
Q Okay. Here you have a study in Libby and it's not a big group, it's a small group, and it was a group that was picked precisely because they picked themselves, in your own words, the rapid progression. If you want to know whether that's unique to Libby, you'd have to look for a comparable study outside of Libby, right?
A Right, nobody's published it.
Q And so -- but it's not that you know it's unique to Libby, it's that you haven't seen a study like this outside of Libby, correct?
A Yeah, but, you know, I don't have x-ray vision to know whether they actually have it and haven't published it, so if they haven't published

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it, the likelihood is that they haven't seen it.
Q Well, but that is -- that is an inference on your part. All you know is that you have a highly select group of people where you've made this observation at Libby and you're not aware of a comparable study outside of Libby, fair?
A That's true.
Q Okay. Now, if we talk about -- for a moment about a comparable group within Libby, that is, if you were looking for a larger group at Libby to compare it to the larger groups outside of Libby, you said that the larger groups outside of Libby with non-malignant disease reflect gradual loss, fair?
A Generally.
Q Okay. There are studies that have been done of larger groups of people at Libby, correct?
A At Libby, you said?
Q At Libby.
A They haven't -- not on loss of pulmonary function.
Q Sure, your progression study.
A Oh, my study, yeah.
Q Okay. So if they took a look at your study that you published in 2004, that's a study of a larger group of people, correct?

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A Mm-hm. (Answers affirmatively.)
Q I'm sorry?
A Yes.
Q And that would be a good place to go if you wanted to see is the experience at Libby different from the experience outside of Libby because that's the study that's working with a larger group of people just like the larger group of people outside of Libby, correct?
A That's exactly what it showed, that it was higher than the --
Q We'll get to what it showed. Just answer the question.
A -- prior published studies.
Q Please just answer the question.
Is the study that you did in 2004 on a larger group of people a good place to go for an apples and apples comparison with studies of progression in large groups of people outside of Libby?
A Yes, probably.
Q Okay. Now, when you did the study in 2004, you picked out people and you looked for progression, correct?
A No.
Q How did you pick out --

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A No, I didn't. I just took all-comers.
Q All-comers?
A When they had their second pulmonary function and everybody got a second pulmonary function, so there was no bias in selection.
Q Okay. So the 2004 progression study that you did was an all-comers, no selection, no bias study, correct?
A Right.
Q And that's comparable apples and apples with large group studies outside of Libby that you've looked at and found the slow progression, correct?
A Yes.
Q Whereas, this -- this paper that's not yet published is not an all-comers paper, it's a select group?
A It is a select group. Perfectly willing to admit that.
Q Okay. And that's what's reflected in tab six to Exhibit-1, correct?
A Mm-hm, yes.
Q Now, if we take a look at your 2004 paper, you had the all-comers group, but you only looked at two data points, correct?
A That's true.

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Q And, in fact, if we look at that all-comers group, it turns out that many of them had many more data points, correct?
A I took the first one that I had and the last one that I had when I was doing the study and they had more data points later on. No question they had more data points. There were also some people that got into a study with Enbrel* and that -- I did not take them because of that.
Q Didn't ask you that question with all due respect, Dr. Whitehouse.
MR. LEWIS: Doctor, just try to answer the questions that counsel is asking you. Okay?
THE WITNESS: I thought I was.
Q (By Mr. Bernick) I know. That's okay, but let's just keep on going ahead.
The 2004 study, you used only two data points with respect to each of the individuals in that study, correct?
A Yeah.
Q And isn't it true that there were many more data points that were available to be used in that study beyond those two data points?
A No, because I cut it off at a certain point, put the data together and ignored everything that

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that's supposed to be used for filling out a death certificate is the test of, well, what was the cause of death, and Dr. Frank has told us that and I think you've agreed, right?

A Yeah.

Q And Dr. Frank says when Selikoff did his BAI work, he looked for more information that was on the death certificate, but the test was still the same, that is, what was the cause of death, so I'm now asking in the case of your work with the CARD mortality data and including people in your group of 79 people who are people where you say their death was in some fashion related to non-malignant disease. I'm asking for what tests you used.

Was it the test of, what's the cause of death? Was it, was asbestos-related illness a substantial contributing factor? Was it, the asbestos-related illness was a major -- which test did you use?

A Same way you described for Selikoff, took the death certificate regardless of what the death certificate said, reviewed the chart, and found out whether or not that was -- if it said asbestosis, was that legitimate, really was asbestosis and respiratory failure or was it a pneumonia but

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asbestosis was the underlying cause. Was it cor pulmonale, but asbestosis was a cause of cor pulmonale.

Q So --

A We were looking for direct cause.

Q You were looking for direct cause, that is, the same way a death certificate should be filled out?

A Yeah, the way it should have been filled out in the first place, yes.

Q Okay. And that's how you included people in your --

A Yes.

Q -- group of 79; is that right?

A Yes.

Q Now, is there anything -- any place that we can go to see how you made that judgment for any of the people who are on your list of 79, that is, Exhibit-15? Is there any place where we can go to find out how you made the judgment about the cause of death?

A No, except to go to the chart and you've got other places. You know, I talked to doctors about it and talked to the family physician as to what happened, all kinds of things like that to get the

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information.

Q That's information?

A Mm-hm. (Answers affirmatively.)

Q But if I want to know with respect to anybody who is on Exhibit-15, that is, for whom you're relying for your idea of progression to death, is there any way that I can determine how you decided what the cause of death was for any of those people?

A Probably not because it -- after I've gone through all the things I need to go through, then I fill out on my computer whether it was related to asbestos or whether it was not related to the contributing cause.

Q So there's no place that even today --

A There's no written record that will help in that.

Q Now, my last question and I am done -- just in time -- relates to going from your group of 79 people.

You've told us that the 79 people who are listed in Exhibit-15 are the source of information regarding how people with severe diffuse pleural thickening present differently you think from people with the same disease outside of Libby, and we've gone through that now in all the different areas of

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difference, thickness of pleura tissue, occupational history or exposure history, blunting, and progression, right?

A Right.

Q Okay. Now, you offered the view that you could use the information that you have about the 79 people from the CARD mortality study and extrapolate to the 950 or, thereabouts, people who have made claims in this case, right?

A Correct.

Q Okay. And I take it then that you're not going to be relying upon the remaining 850 people for any of your opinions in this case; is that right?

A No, there's no way I would be able to in --

MR. LEWIS: No, I think that was confusing. I don't mean to interfere.

MR. BERNICK: I'll --

MR. LEWIS: You're talking about -- are you talking about opinions relating to the progression?

MR. BERNICK: I'll be very clear.

MR. LEWIS: Okay. Because it's --

MR. BERNICK: I'll be very clear.

MR. LEWIS: All right.

Q (By Mr. Bernick) We know that there's a

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after the bankruptcy.
A Well, no. Well, almost all of them filed beforehand and I do know that to be a fact.
Q And I've not seen that. Do we have the analysis?
A No, you don't have an analysis of that.
Q Okay. Next step.
A The second point is that the breakdown on the mortality study was 33 percent for miners. The remainder -- it was basically almost a third, a third, a third.
Q You say the mortality study --
A Yeah.
Q When you say the mortality study --
A You extrapolate that --
Q Hang on.
A You --
Q No, no, no. I just want to get it piece by piece.
The breakdown that you say of the mortality study, who in the mortality study, the 79?
A The 79.
Q The 79?
A The 79.
Q So if we go to the 79 people, there's a

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breakdown between who was a worker and who was a family member and who was community?
A Right.
Q Okay. And that's indicated in Exhibit-15, right?
A That's Exhibit- -- yeah, somewhere in there.
Q Okay.
A And then if you look at the 950 claimants, the breakdown is almost identical. I mean, it's within a couple of percentage points.
Q Where do we see -- where is that done?
A Oh, the lawyers have done it.
Q Do I have --
A I don't know.
Q Do I have present in some fashion to us here in the case the breakout of the 950 by community exposure, family exposures, and worker exposure?
A I think you do, but I don't know where it is. I mean, they would have given it to you.
Q But you don't have it here today?
A I do not have it here today.
Q So you have the 79 people that we have broken out by community, family, worker?
A Mm-hm. (Answers affirmatively.)
Q You have the 950 with respect to whom you

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want to offer an opinion, and you believe that they fall into -- they show a similar breakdown, community, worker, family, but we don't have that breakdown here today, fair?
A That's fair.
Q Okay. Go ahead.
A And based upon that, the probability that the statistics in the mortality study will follow through on the 950 --
Q Okay.
A -- of what we know about the disease and then we'll see a similar -- similar death rate, ultimately.
Q Okay. And that's your extrapolation?
A That's the extrapolation.
Q Now, is that extrapolation set out in writing anywhere that we can look at?
A I think it is, but I don't know where it is, whether it's in my report or whether it's in the data. I think it's in the data that was submitted to you.
Q Is there any report that explains for us the scientific basis for believing that that extrapolation is sound?
A I doubt there's any specific report, no.

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Q Okay. Now, I want to then, finally, focus on epidemiology. Okay?
Is it correct there's no epidemiological analysis that's been done on the CARD patient population? Is that true?
A Well, yes, there has been because the ATSDR and NASA and all that have followed through and gotten their exposure histories and haven't published it yet.
Q Well, I'm talking about -- I'm talking about something I can get ahold of, something that's available to us.
Is there any available epidemiology on the people at the CARD clinic?
A You know, there's some stuff that just came out recently. There are several things actually you might want to -- one is -- there was a pilot study that was done in 2000.
Q Pilot study? Is that an epidemiologic study? That's a pilot study.
A Oh, that probably does not qualify, you're right.
Q As of the criminal trial which took place a few weeks ago --
A I think there's some stuff that's come out